



**COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PLANNING AND BUILDING
STAFF REPORT**

Tentative Notice of Action

Promoting the wise use of land
Helping build great communities

MEETING DATE March 3, 2006 LOCAL EFFECTIVE DATE March 24, 2006	CONTACT/PHONE Marsha Lee, Project Manager 805-788-2008	APPLICANT Stimson/Verizon Wireless	FILE NO. DRC2003-00167
SUBJECT A request by Verizon Wireless/Stimson for a Minor Use Permit to allow the construction of a wireless telecommunication facility consisting of 6 antennas mounted on three 15 foot steel poles (2 antennas per pole), associated equipment, utility trenching, and grading. The project will result in the disturbance of approximately 76 cubic yards of a 19.09 acre parcel. The proposed project is within the Agriculture land use category and is at 2100 Slack Street, approximately 300 yards from the corner of Slack Street and Henderson Street. The project is located The site is in the Rural San Luis Obispo County Planning Area.			
RECOMMENDED ACTION Approve Minor Use Permit DRC2003-00167 based on the findings listed in Exhibit A and conditions listed in Exhibit B.			
ENVIRONMENTAL DETERMINATION The Environmental Coordinator, after completion of the initial study, has determined that a Categorical Exemption (ED05-286; Class 3, small facility) is appropriate under the provisions of CEQA.			
LAND USE CATEGORY Agriculture	COMBINING DESIGNATION Sensitive Resource Area, Geologic Study Area	ASSESSOR PARCEL NUMBER 073-341-008	SUPERVISOR DISTRICT(S) 5
PLANNING AREA STANDARDS: None applicable			
LAND USE ORDINANCE STANDARDS: Communications Ordinance <i>Does the project conform to the Land Use Ordinance Standards: Yes - see discussion</i>			
FINAL ACTION This tentative decision will become the final action on the project, unless the tentative decision is changed as a result of information obtained at the administrative hearing or is appealed to the County Board of Supervisors pursuant Section 23.01.042 of the Coastal Zone Land Use Ordinance; effective on the 10th working day after the receipt of the final action by the California Coastal Commission. The tentative decision will be transferred to the Coastal Commission following the required 14 calendar day local appeal period after the administrative hearing.			
ADDITIONAL INFORMATION MAY BE OBTAINED BY CONTACTING THE DEPARTMENT OF PLANNING & BUILDING AT: COUNTY GOVERNMENT CENTER ♦ SAN LUIS OBISPO ♦ CALIFORNIA 93408 ♦ (805) 781-5600 ♦ FAX: (805) 781-1242			

EXISTING USES: Single family residence, City of San Luis Obispo water tank, and two approved wireless communication facilities.	
SURROUNDING LAND USE CATEGORIES AND USES: <i>North:</i> Agriculture/Cal Poly State University <i>East:</i> Rural Lands - Highway 101 <i>South:</i> City of San Luis Obispo/Residences <i>West:</i> City of San Luis Obispo/Single Family Residences	
OTHER AGENCY / ADVISORY GROUP INVOLVEMENT: Public Works, California Department of Forestry (CDF), Environmental Health	
TOPOGRAPHY: Moderate to steeply sloping	VEGETATION: Grasses, forbs, and pines and cypress trees
PROPOSED SERVICES: Water supply: On site well Sewage Disposal: NA Fire Protection: California Department of Forestry	ACCEPTANCE DATE: January 17, 2006

DISCUSSION

Proposed Project:

The proposed project consists of 6 antennas mounted on three 15 foot steel poles (2 antennas per pole), and associated equipment (9 cabinets) and utility trenching. All equipment and antennas will be painted a camouflage color to blend with the surroundings during all seasons. The utility trench will be reseeded with native grasses and the existing trees will provide backdrop of the facilities, and the facilities will not silhouette the sky. The utility meter will be incorporated into the existing wall/landscape area at the base of Slack Street and the western property edge. Exterior lighting will be manual turn-on only. The project will be in conformance with the Noise Element.

ORDINANCE COMPLIANCE

The project was reviewed for conformance with the San Luis Obispo Land Use Ordinance and was determined to be consistent with these standards with the recommended conditions of approval. The combining designations include Sensitive Resource Area and Geologic Study Area.

Radio Frequency Report:

The communication facilities section of the Land Use Ordinance requires applications for communication facilities provide estimates of non-ionizing radiation generated and/or received by the facility. The applicant supplied a report to evaluate the proposed cellular communications facilities for compliance with appropriate guidelines limiting human exposure to radio frequency electromagnetic fields. The Radio Frequency (RF) Report, dated January 3, 2005, concluded the maximum cumulative level at ground for the simultaneous operation of all three carriers do not exceed FCC guidelines at any point on the property and is expected to be less than 34% of the public exposure limit. Since the antennas are to be mounted on poles, and not accessible to the general public, no mitigation measures are necessary to comply with the FCC public exposure guidelines.

Co-location

The Land Use Ordinance requires applicants to use existing structures when feasible. In addition to the applicant's proposal, this site contains two approved wireless facilities. Co-location on the approved structures is not desirable at this location because multiple shorter poles are easier to blend within the existing dense vegetation and will be less visible than a single taller monopole.

COMBINING DESIGNATIONS:

Sensitive Resource Area (SRA)

Section 22.07.164 of the Land Use Ordinance addresses Sensitive Resource Areas and the necessary findings for the approval of Development Plans with this combining designation. A Visual Analysis of the proposed project was prepared by Lawrence Headley & Associates dated May 18, 2005. Mock-ups of the proposed monopoles and equipment cabinets and fencing were installed to assess visual impacts. Staff viewed the mock-ups and concurs with the visual analysis conclusions. The report concluded that the proposed project would not affect visual resources or lessen the quality of public views and is consistent with applicable County ordinances and regulations which require measures to make communication facilities less obtrusive.

The project will be conditioned to comply with the Noise Element and only manual turn-on lighting is permitted. Landscaping: The project is conditioned for reseeded of all disturbed grass areas; no trees shall be removed as a part of this project and the existing trees will provide backdrop to the poles. Painting: All facilities will be painted camouflage to blend with the surroundings. After review of conformance with this section of the ordinance, this project is found to be consistent with the Land Use Ordinance.

Geologic Study Area (GS)

Section 22.07.084 of the Land Use Ordinance requires all land use applications for projects located within a GSA are to be accompanied by a report prepared by a certified engineering geologist and /or registered civil engineer. This project will require grading to accommodate construction of the equipment shelter and monopoles. The project has been conditioned to comply with the recommendations of the Geologic Hazard Study (Earth Systems Pacific, June 22, 2005), the Geotechnical Investigation (Toro International, October 31, 2003) and recommendations by County Geologist (letter dated August 26, 2005).

The City of San Luis Obispo requests a condition requiring an easement agreement prior to the issuance of a building permit. The project has been conditioned with this requirement.

COMMUNITY ADVISORY GROUP COMMENTS: N/A

AGENCY REVIEW:

Public Works – no concerns; recommend approval.
Environmental Health – hazard materials business plan required
CDF – no comment – fire safety plan required
City of San Luis Obispo – proposed access requires access easement with City of San Luis Obispo; manual lighting only; landscape screening
Cal Trans - none received

LEGAL LOT STATUS:

The lot was legally created by deed at a time when that was a legal method of creating lot.

Staff report prepared by Marsha Lee and reviewed by Kami Griffin

EXHIBIT A - FINDINGS DRC 2003-00167

CEQA Exemption

- A. The project qualifies for a Categorical Exemption (Class 3) pursuant to CEQA Guidelines Section 15303 because the project is minor in nature and will not require the removal of any native vegetation.

Minor Use Permit Findings

- B. The proposed project or use is consistent with the San Luis Obispo County General Plan because the use is an allowed use and as conditioned is consistent with all of the General Plan policies.
- C. As conditioned, the proposed project or use satisfies all applicable provisions of Title 22 of the County Code.
- D. The establishment and subsequent operation or conduct of the use will not, because of the circumstances and conditions applied in the particular case, be detrimental to the health, safety or welfare of the general public or persons residing or working in the neighborhood of the use, or be detrimental or injurious to property or improvements in the vicinity of the use because the installation and operation of such a facility does not generate activity that presents a potential threat to the surrounding property and buildings. This project is subject to Ordinance and Building Code requirements designed to address health, safety and welfare concerns.
- E. The proposed project or use will not be inconsistent with the character of the immediate neighborhood or contrary to its orderly development because the cellular telecommunications facility will not conflict with the surrounding lands and uses.
- F. The proposed project or use will not generate a volume of traffic beyond the safe capacity of all roads providing access to the project, either existing or to be improved with the project because the project is located on a local road constructed to a level able to handle any additional traffic associated with the project.

Sensitive Resource Area Findings

- G. In accordance with Section 22.14.100 C.5. a., the proposed project will not create significant adverse effects on the natural features of the site or vicinity that were the basis for the Sensitive Resource Area designation and will preserve and protect such features through site design because the project will disturb the minimum amount of area necessary to construct the facilities and will protect the integrity of the viewshed through careful siting, colors that blend with the surroundings, and vegetation backdrop.
- H. In accordance with Section 22.14.100 C.5. b, the design and siting of all physical improvements of the proposed project or use considers natural features and topography since the facilities will be painted, and they are sited using the existing pine trees as backdrop and will not silhouette the sky.

- I. In accordance with Section 22.14.100 C.5. c, any proposed clearing of topsoil, trees, or other features is the minimum necessary to achieve safe and convenient access and siting of proposed structures and will not create significant adverse effects on the identified resources because minimal grading is proposed, no trees will be removed, and adequate setbacks will be maintained from the existing trees.
- J. In accordance with Section 22.14.100 C.5. d., soil and sub-soil conditions are suitable for any proposed excavation. Furthermore, site preparation and drainage improvements have been designed to prevent soil erosion and sedimentation through undue surface run-off, and the disturbed areas will be reseeded.

EXHIBIT B
CONDITIONS OF APPROVAL DRC2003-00167

Approved Development

1. **This approval authorizes the installation and operation of an unmanned wireless communication facility, including the following improvements:**
 - a. 6 antennas (4 feet high by 13 inches wide by 7 inches deep) flush mounted (i.e. antennas are mounted on the face of the pole), on three 15 foot steel poles (2 antennas per pole), as measured from average natural grade, including footings.
 - b. the utility meter will be incorporated into the existing wall/landscape area at the base of Slack Street and the western property edge and will not extend above the wall as viewed from Slack Street.
 - c. 6 inch concrete slab and retaining wall (12 feet wide by 28 feet long by 6 feet high) CMU wall and chain link fence enclosure with brown slats, located adjacent to existing equipment cabinets (by other carriers), to accommodate nine (9) equipment cabinets with a maximum of 8 feet height.
 - d. Support utilities in approximately 160 feet in length underground trench. Disturbed areas will be reseeded with native grasses.
 - e. RF warning signage
 - f. All equipment and antennas will be painted a camouflage color to blend with the surroundings during all seasons.

Site Development

2. Site Development shall be consistent with the approved site plan and elevations
3. The applicant agrees to allow other carriers to co-locate at this site, if technically feasible, subject to land use permit approval.
4. No tree removal is authorized with this permit.
5. No automatic lighting is allowed.

Conditions required to be completed at the time of application for construction permits

Erosion and Sedimentation Control

6. **Prior to submitting construction plans for review (and any site disturbance or issuance of grading permits or building permits), the applicant shall submit a Sedimentation and Erosion Control Plan, prepared and signed by a Registered Civil Engineer, that addresses both temporary and long-term sedimentation and erosion control measures. The plan shall include but not be limited to the following measures:**
 - a. Slope surface stabilization: Temporary mulching, seeding or other suitable stabilization measures approved by the County Engineer shall be used to protect exposed erodible areas left in an unfinished state during the period from October 15 through April 15. Earth or paved interceptors and diversions shall be installed at the top of cut or fill slopes where there is a potential for erosive surface runoff.

- b. Erosion and sedimentation control devices: In order to prevent sedimentation discharges, erosion and sediment control devices shall be installed as necessary for all grading and filling. Control devices and measures may include, but are not limited to, energy absorbing structures or devices to reduce the velocity of runoff water.
- c. Final erosion control measures: During the period from October 15 through April 15, all surfaces disturbed by vegetation removal, grading, or other construction activity are to be revegetated to control erosion within 30 days after completion of grading, unless the graded areas are covered with impervious or other improved surfaces authorized by approved plans.
- d. Control of off-site effects: All grading activity shall be conducted to prevent damaging effects of erosion, sediment production and dust on the site and on adjoining properties.

Soils and Geologic Issues

- 7. **Prior to submitting construction plans for review (and any site disturbance or issuance of grading permits or building permits),** a certified engineering geologist shall review plans and specifications with regard to foundations and earthwork, and indicate approval of the geo-technical aspects of the design in a letter to be included with the construction plan submittal to the Department of Planning and Building.
- 8. The Certified Engineering Geologist shall review all soil excavation in the field to insure compliance with the recommendations of the soils and Foundation Investigation Report. The Engineer shall inspect work on-site and verify building construction per the Geologic Hazard Study (Earth Systems Pacific, June 22, 2005 and Geotechnical Investigation (Toro International, October 31, 2003), *Geotechnical Investigation* revised report prepared by Toro International dated October 20, 2003, and recommendations by County Geologist (letter dated August 26, 2005) included as conditions of approval.
- 9. **Prior to submitting construction plans for review (and any site disturbance or issuance of grading permits or building permits),** a structural engineer, experienced in landslide fences shall evaluate the proposed design.
- 10. **Prior to submitting construction plans for review (and any site disturbance or issuance of grading permits or building permits),** the applicant shall ensure that the recommendations of the *Geotechnical Investigation* revised report prepared by Toro International dated October 20, 2003, Geologic Hazard Study (Earth Systems Pacific, June 22, 2005 and Geotechnical Investigation (Toro International, October 31, 2003) and recommendations by County Geologist (letter dated August 26, 2005) are incorporated into and made part of the first sheet and individual applicable sheets of the construction plans.

Conditions required to be completed prior to issuance of Construction Permits

Site Restoration

- 11. **Prior to issuance of a Building Permit,** the applicant shall post a performance bond with the County in an amount commensurate with the cost of facility removal and site restoration. The performance bond shall be released by the County at the time the facility is removed and the site is restored.

Fire Safety

12. **Prior to issuance of a construction permit**, the applicant shall provide the county Department of Planning and Building with a fire safety plan approved by the county Fire Department (CDF).

Easement Agreement

13. **Prior to issuance of a building permit**, the applicant shall provide proof of the easement agreement with the City of San Luis Obispo.

Hazard Materials Plan

14. **Prior to issuance of construction permit**, the applicant shall submit for review and approval a Hazardous Materials Business Plan for the proposed cellular facility to the County Environmental Health office for review and approval.

Grading Permit

15. **Prior to issuance of a construction permit**, the applicant shall apply for a grading permit consistent with the soils and geology information.

Conditions continuing throughout the construction process

Geology and Soils

16. **Throughout the construction process (and documented prior to final inspection)** the applicant shall be held responsible for the coordination and implementation of these recommendations including, but not limited to, all infield and onsite construction observations, soil testing programs and reviews as recommended by an engineering geologist and or the civil engineer for the following tasks:
- a. Review of county approved plans
 - b. Review of stripping and clearing of vegetation
 - c. Review of cut and fill slopes, benching, fill placement and compaction
 - d. Review of preparation of soil to receive fill
 - e. Review of fill placement and compaction
 - f. Review of subsurface drainage control
 - g. Review of footing excavations
 - h. Review of pre-moistening of sub-slab soils
 - i. Review of erosion control measures
 - j. Submittal of all final reports from the Certified Engineering Geologist, Soils Engineer, and Civil Engineer (and others as required) to the Department of Planning and Building.

Conditions to be completed prior to occupancy or final building inspection /establishment of the use

Explanatory Warning Signage for Occupational Exposure

17. Prior to final inspection, explanatory warning signs* to prevent occupational exposures in excess of the FCC guidelines are to be posted at the equipment cabinets and on the antennas such that they would be readily visible from any angle of approach to persons who might need to work near the antennas.

(*Warning signs should comply with ANSI C95.2 color, symbol, and content conventions. In addition, contact information should be provided (e.g., a telephone number) to arrange for access to restricted areas.)

Hazard Materials Plan

18. **Prior to final inspection**, the applicant shall provide verification from Environmental Health that the Hazardous Materials Business Plan has been implemented.

Fire Safety

19. **Prior to operation or final inspection**, which ever occurs first, the applicant shall obtain final inspection and approval from CDF of all required fire/life safety measures.

Visual and Aesthetics

Paint

20. **Prior to final inspection**, the entire antenna assembly (monopole, antenna, brackets, cables, etc.) and equipment cabinet shall be painted a camouflage, to be approved by County Planning. The color to be used shall be matte finish. The equipment cabinets shall be painted camouflage colors consistent with the colors as approved by the Department of Planning and Building. The colors shall be maintained for the life of the project. Repainting shall occur as necessary.

Landscaping

21. **Prior to final inspection**, the applicant agrees to reseed all disturbed area with native grasses, and install native drought tolerant plants per the Landscape Plan as approved by the Department of Planning and Building.

On-going conditions of approval (valid for the life of the project)

22. All obsolete or used facilities shall be removed within twelve months of cessation of wireless communication operations on the site. The applicant shall be responsible for the removal of such facility and all appurtenant structures and restoration of the site to pre-project condition. Restoration does not include removal of vegetation planted to provide visual screening. At the time the use of the facility is discontinued the owner of the facility must notify the Department of Planning and Building.

Electric and Magnetic Fields

23. The facility shall be designed and operated to ensure that power densities received from transmissions, with all transmitters at the site transmitting at full power, will comply with federal law and regulation.

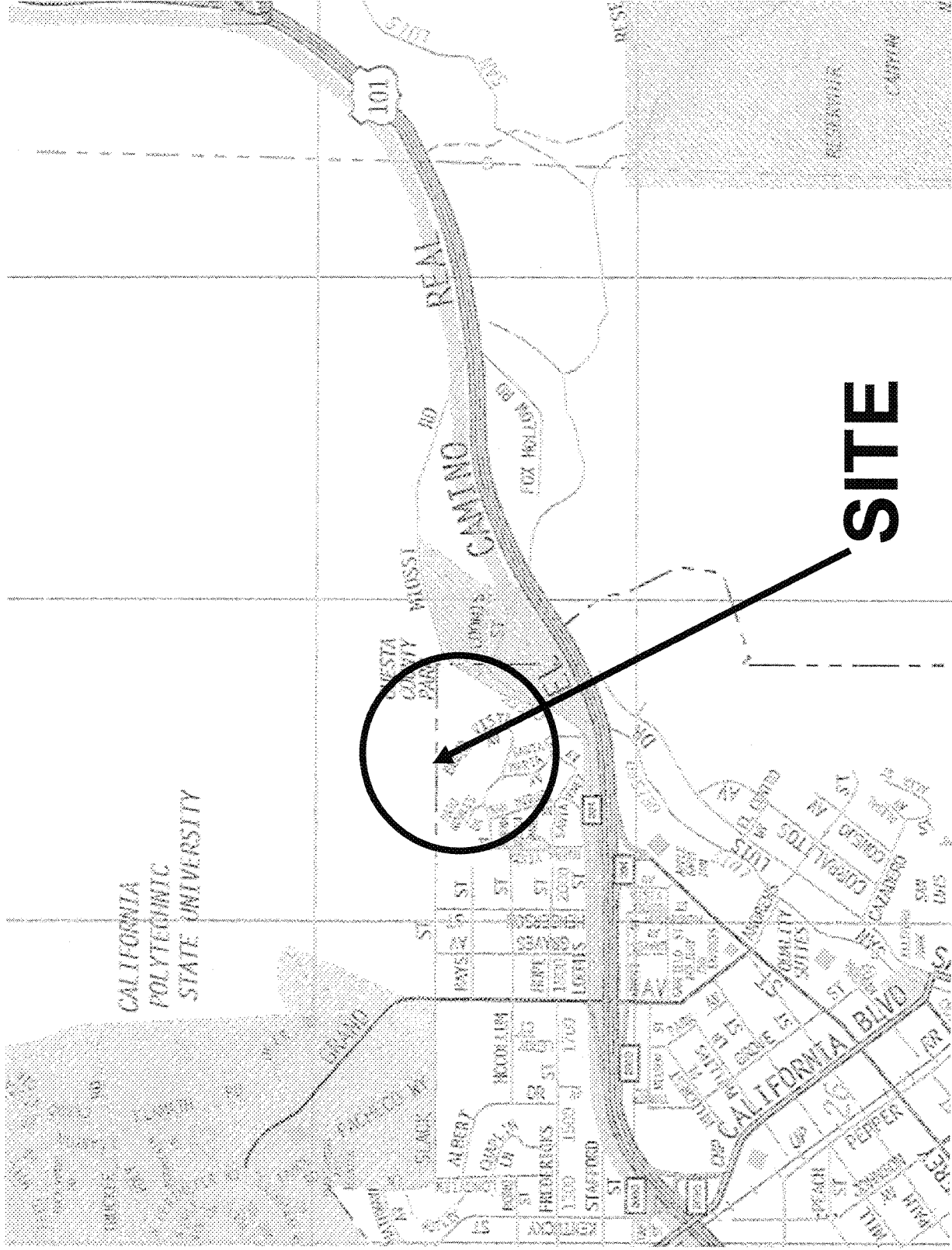
Noise

24. HVAC units shall be sound alternated to meet applicable County and State exterior noise standards, if applicable. The project shall be maintained in compliance with the county Noise Element (including emergency generators). Any back-up or emergency generators shall have a noise baffle cover and shall not exceed a maximum noise level of 65 dbl. at a distance of 50 feet from the generator.

Existing Trees

25. Trimming or removal of existing trees associated with the establishment of the facility shall be avoided unless a hazardous or unsafe condition exists. If any existing trees require trimming or removal, the applicant shall submit a plan to the County Department of Planning and Building for review and approval. The Plan shall be prepared by a qualified arborist and shall demonstrate the following:

- a. need for trimming or removal as a means for avoiding hazardous or unsafe conditions
 - b. the nature and extent of trimming or removal
 - c. the replacement of removed trees with similar species of equal size or at a replacement ratio satisfactory to the County
26. This land use permit is valid for a period of 24 months from its effective date unless time extensions are granted pursuant to Land Use Ordinance Section 22.64.070 or the land use permit is considered vested. This land use permit is considered to be vested once a construction permit has been issued and substantial site work has been completed. Substantial site work is defined by Land Use Ordinance Section 22.64.080 as site work progressed beyond grading and completion of structural foundations; and construction is occurring above grade.
27. All conditions of this approval shall be strictly adhered to, within the time frames specified, and in an on-going manner for the life of the project. Failure to comply with these conditions of approval may result in an immediate enforcement action by the Department of Planning and Building. If it is determined that violation(s) of these conditions of approval have occurred, or are occurring, this approval may be revoked pursuant to Section 22.74.160 of the Land Use Ordinance.



PROJECT

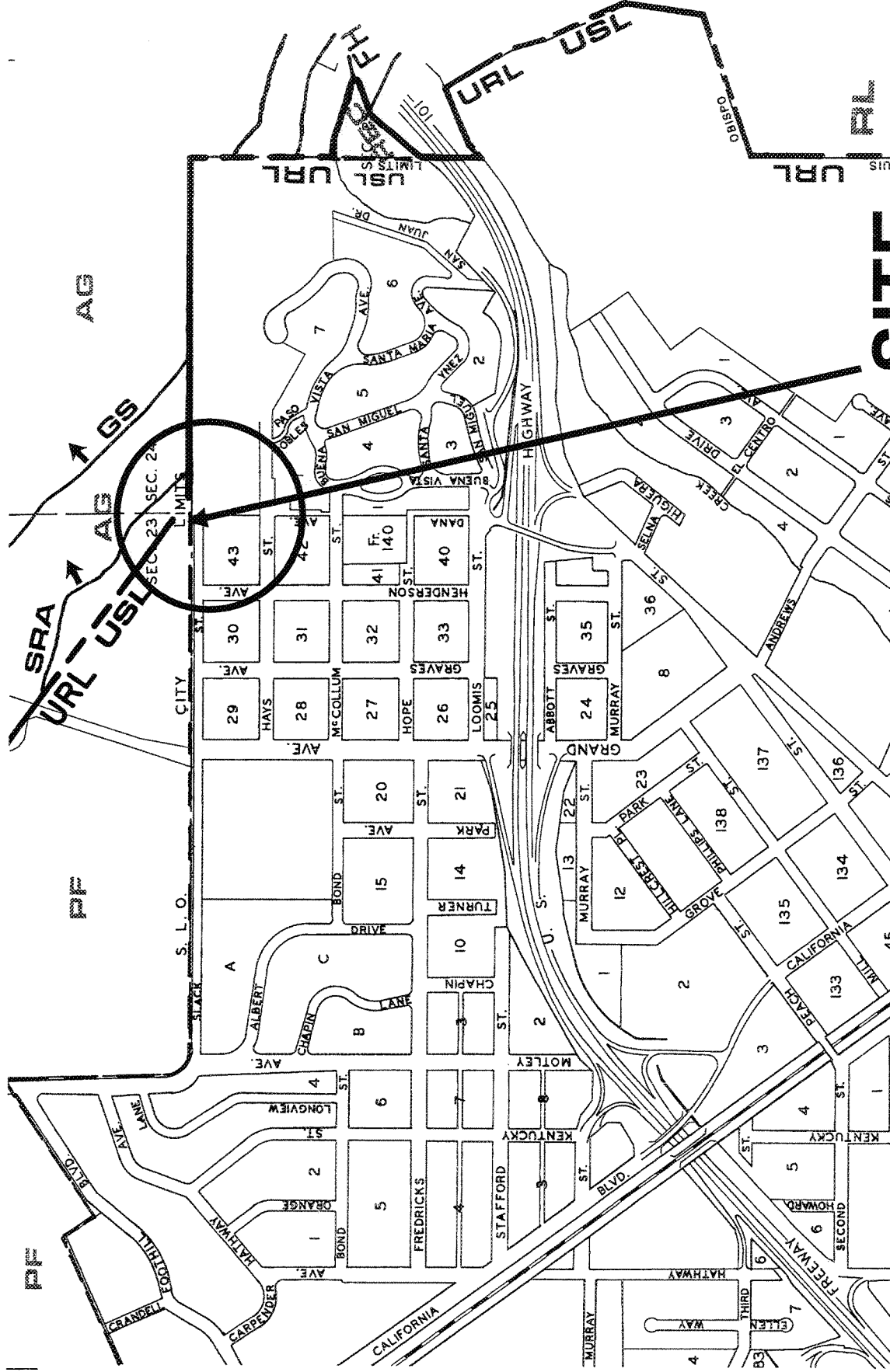
Minor Use Permit

Stimson/Verizon DRC2003-00167

EXHIBIT

Vicinity Map





SITE

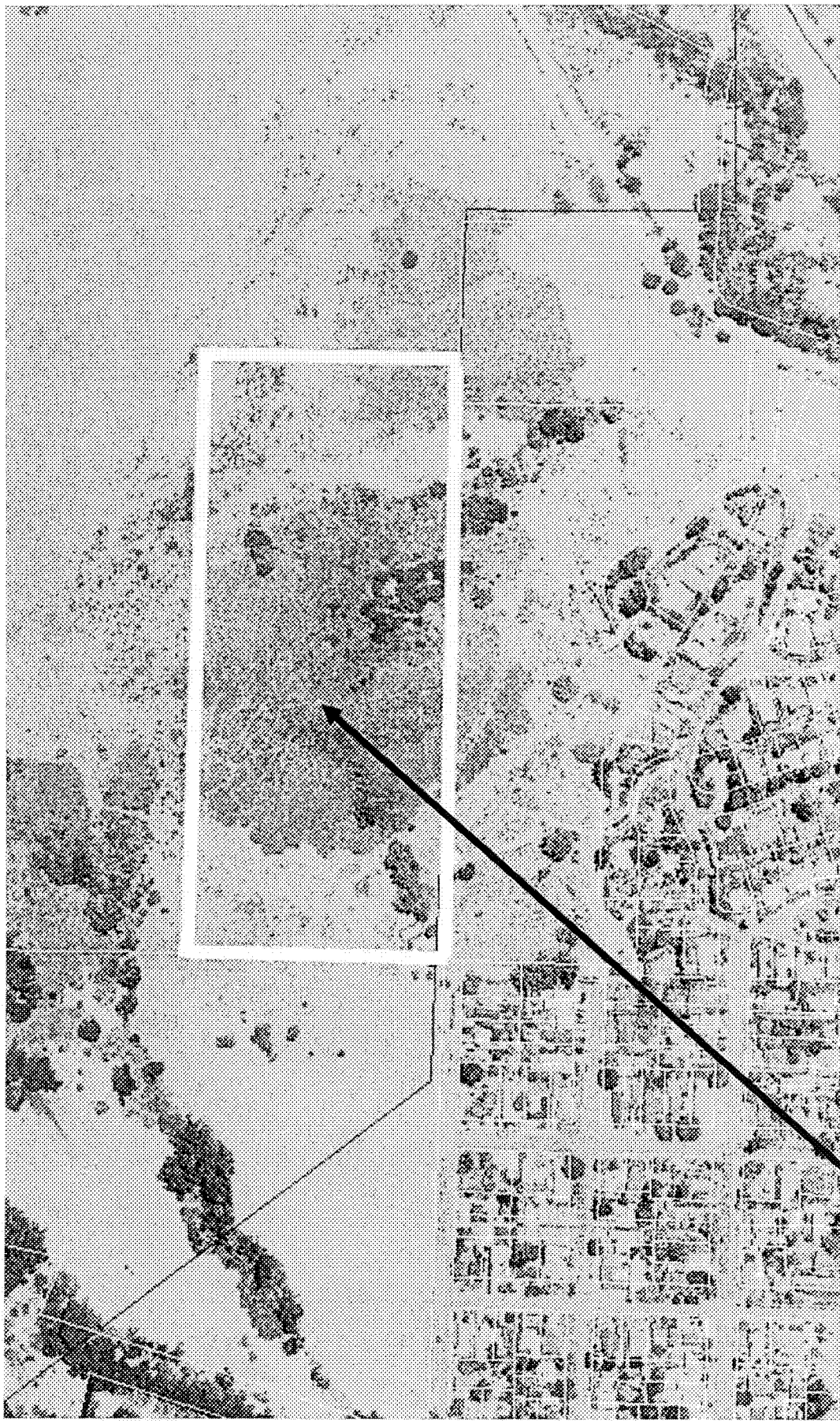
PROJECT

Minor Use Permit
Stimson/Verizon DRC2003-00167

EXHIBIT

Land Use Category





SITE

PROJECT

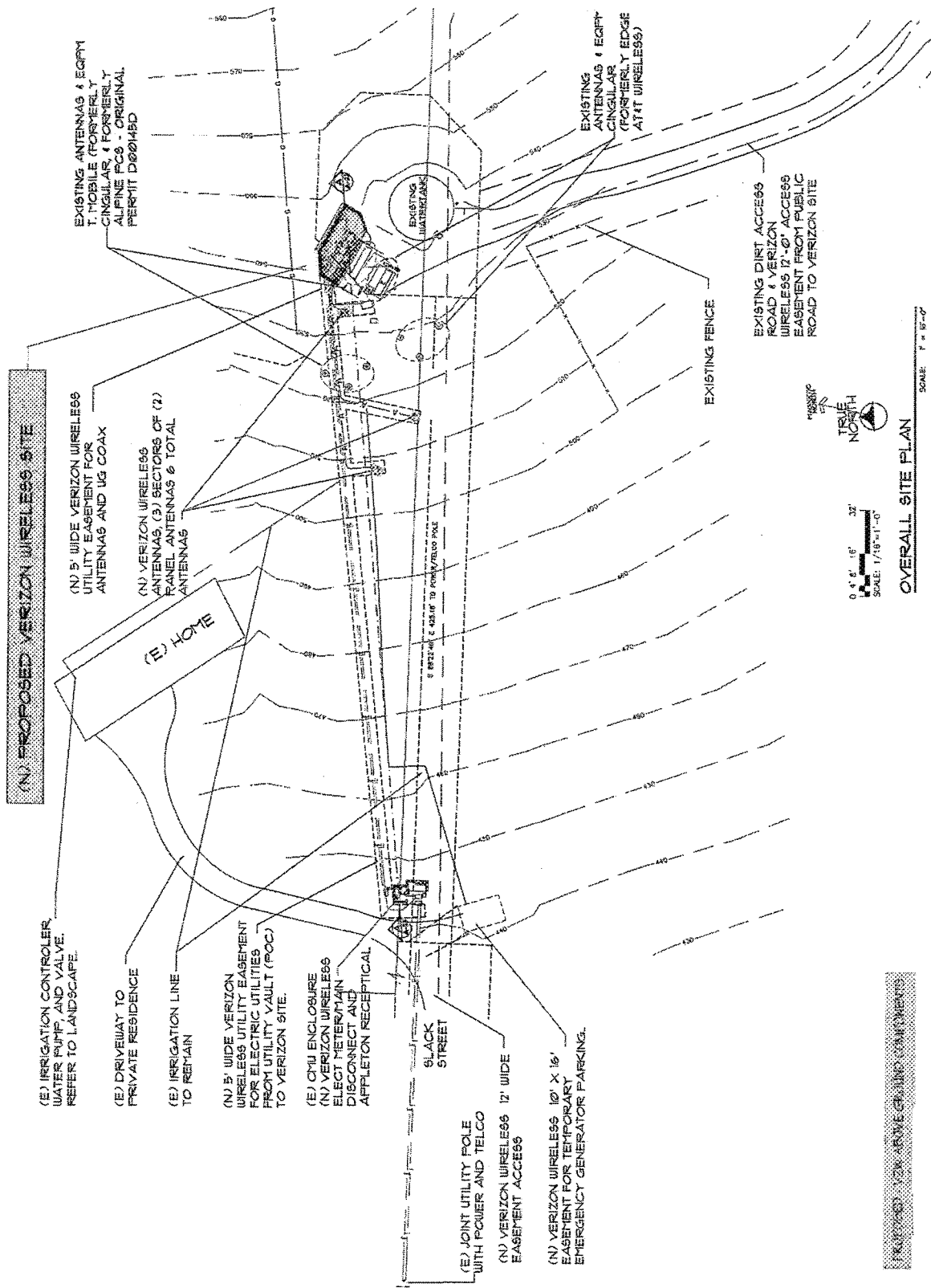
Minor Use Permit
Stimson/Verizon DRC2003-00167

EXHIBIT

Aerial



SAN LUIS OBISPO COUNTY DEPARTMENT OF BUILDING AND PLANNING



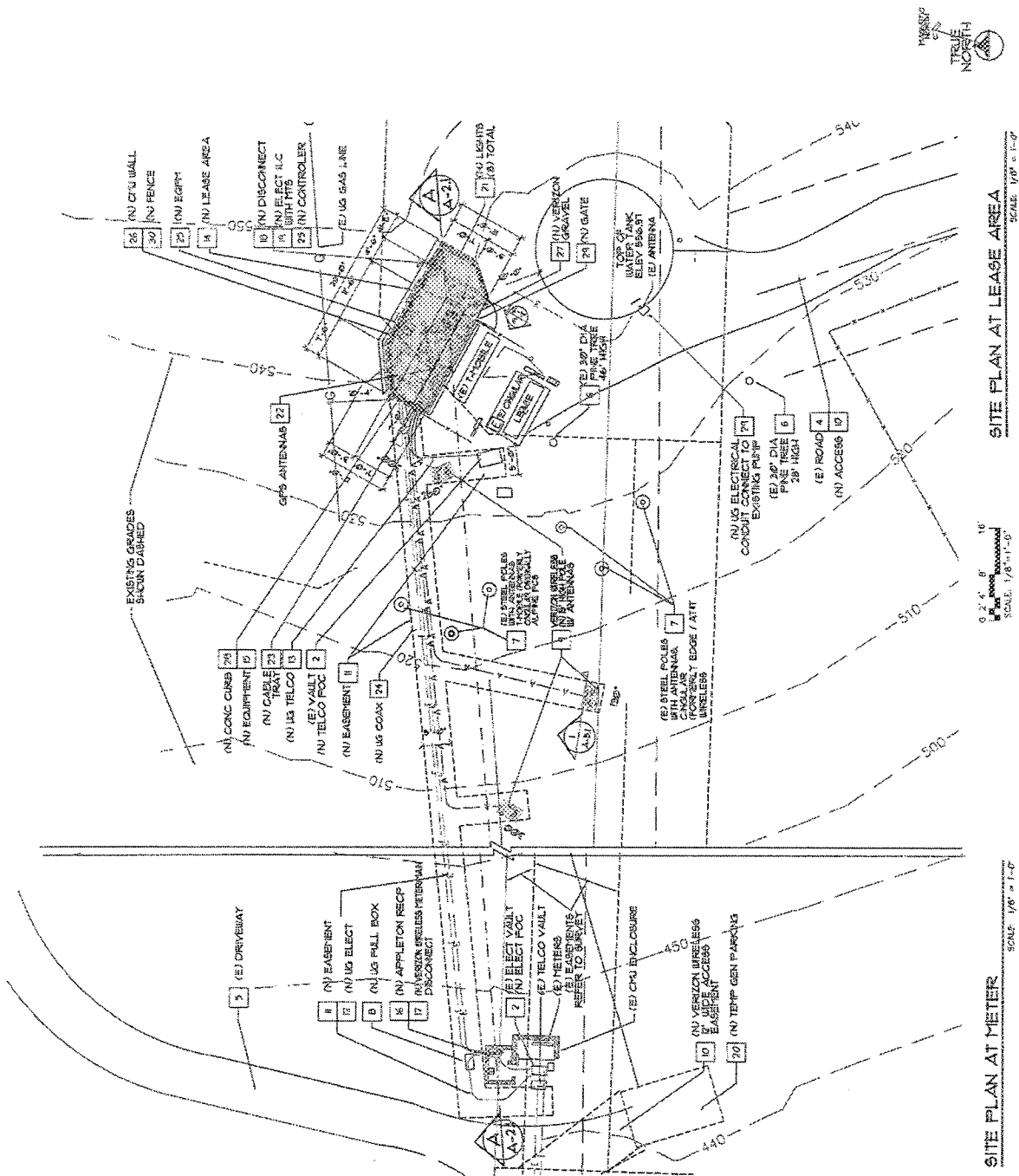
FRIDAY, 120 ARVECHING CARPETS

PROJECT Minor Use Permit
Stimson/Verizon DRC2003-00167



EXHIBIT _____ **Site Plan**

SAN LUIS OBISPO COUNTY DEPARTMENT OF BUILDING AND PLANNING



PROJECT

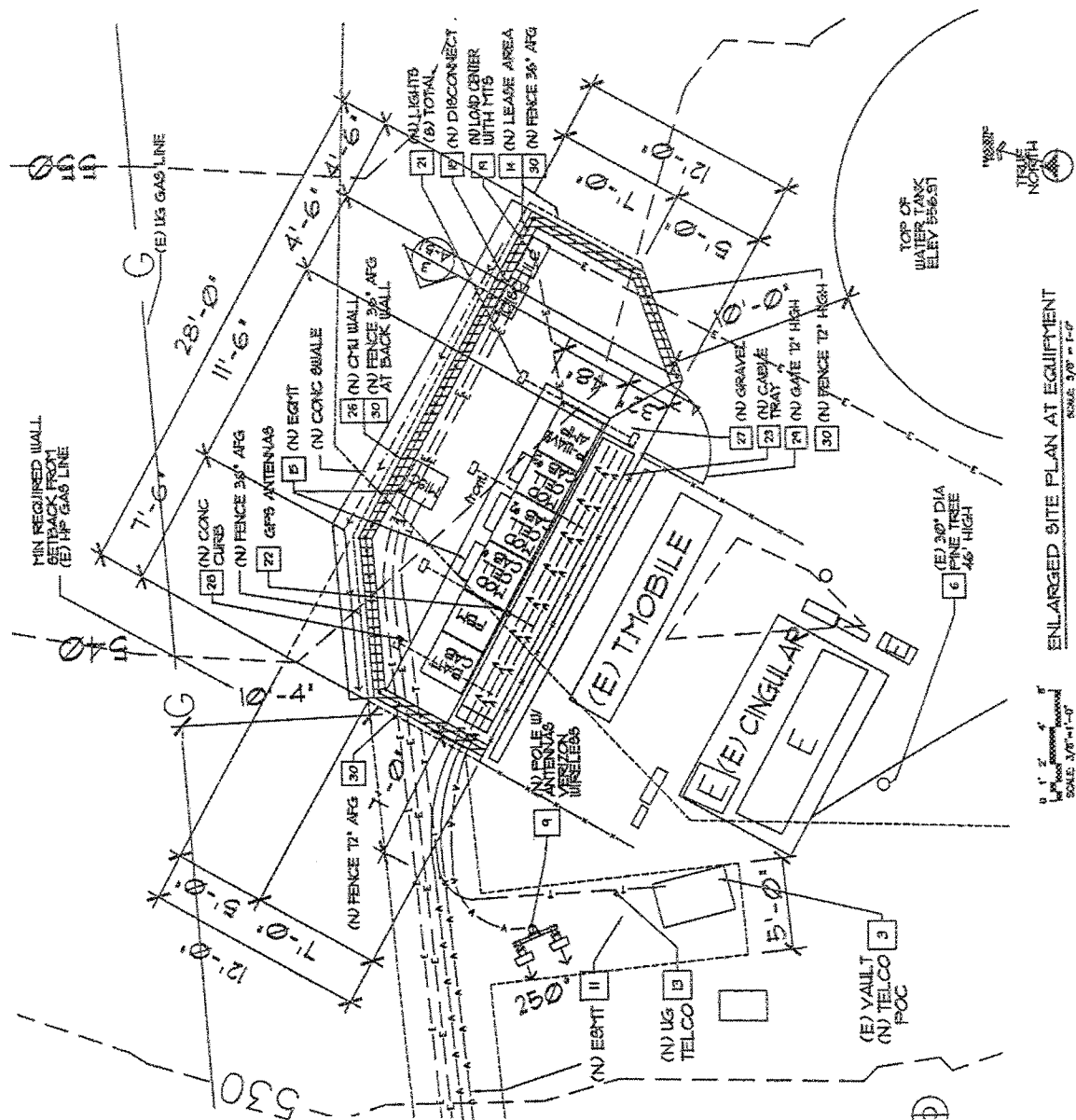
Minor Use Permit

Stimson/Verizon DRC2003-00167

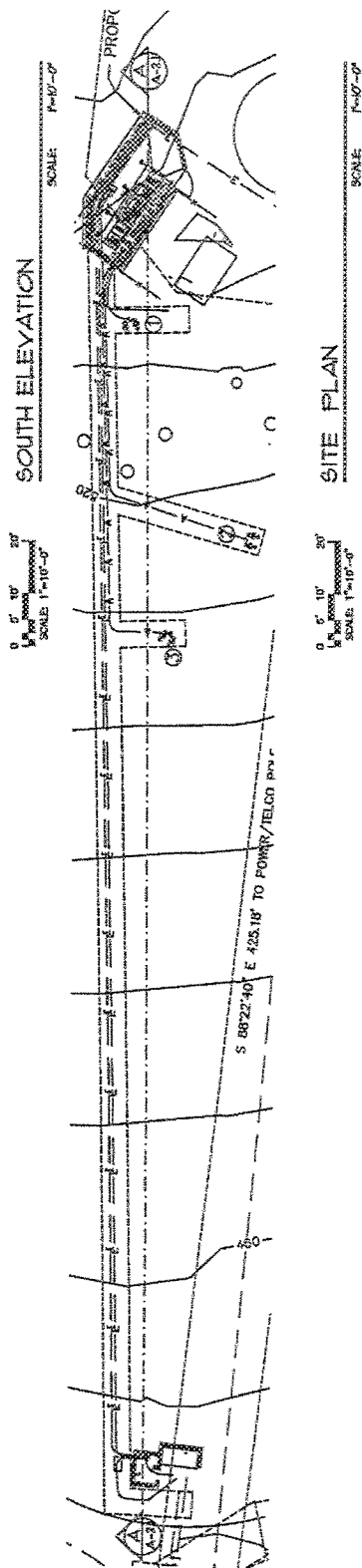
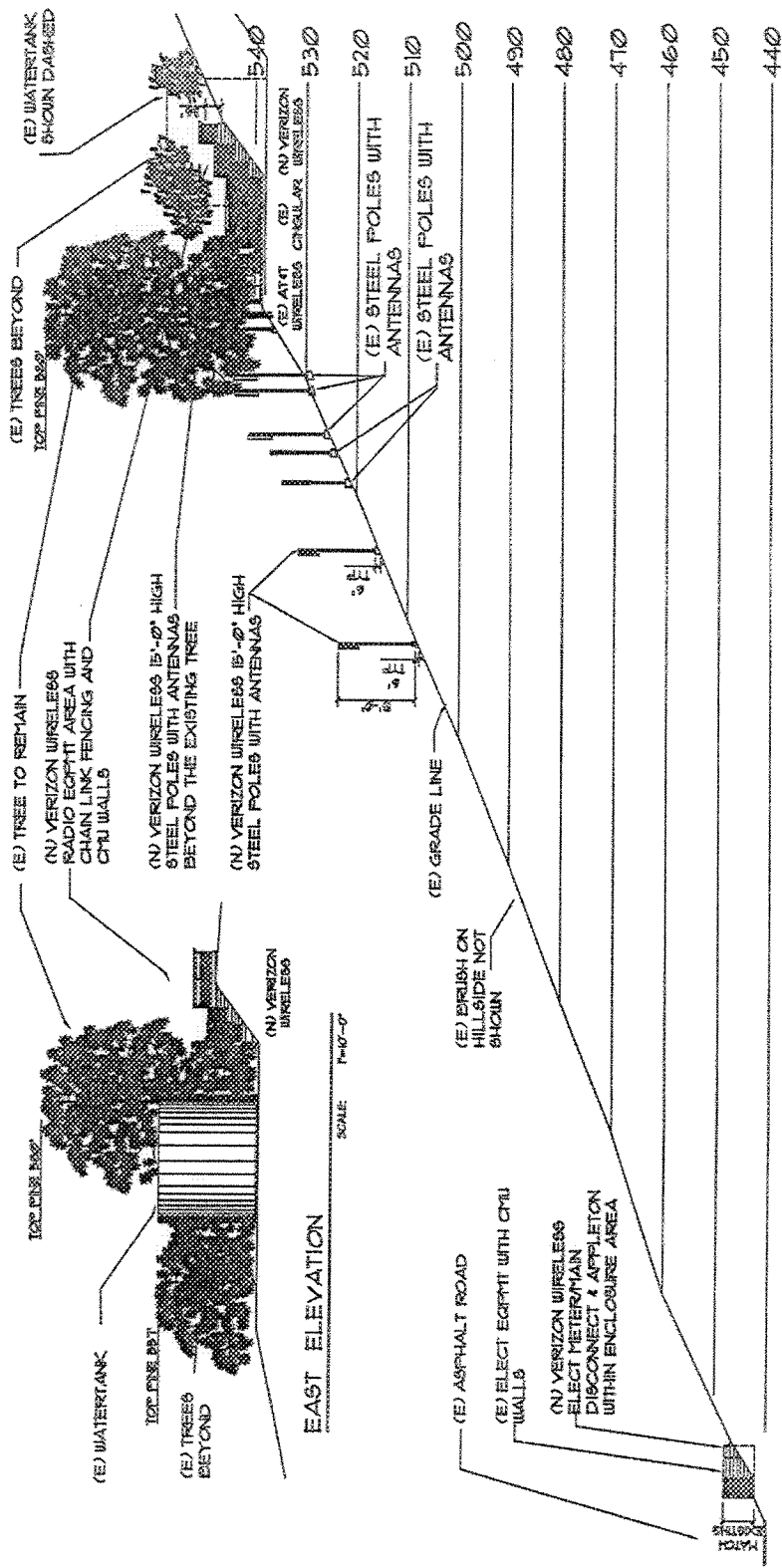


EXHIBIT

Site Plan



SAN LUIS OBISPO COUNTY DEPARTMENT OF BUILDING AND PLANNING



PROJECT

Minor Use Permit
Stimson/Verizon DRC2003-00167



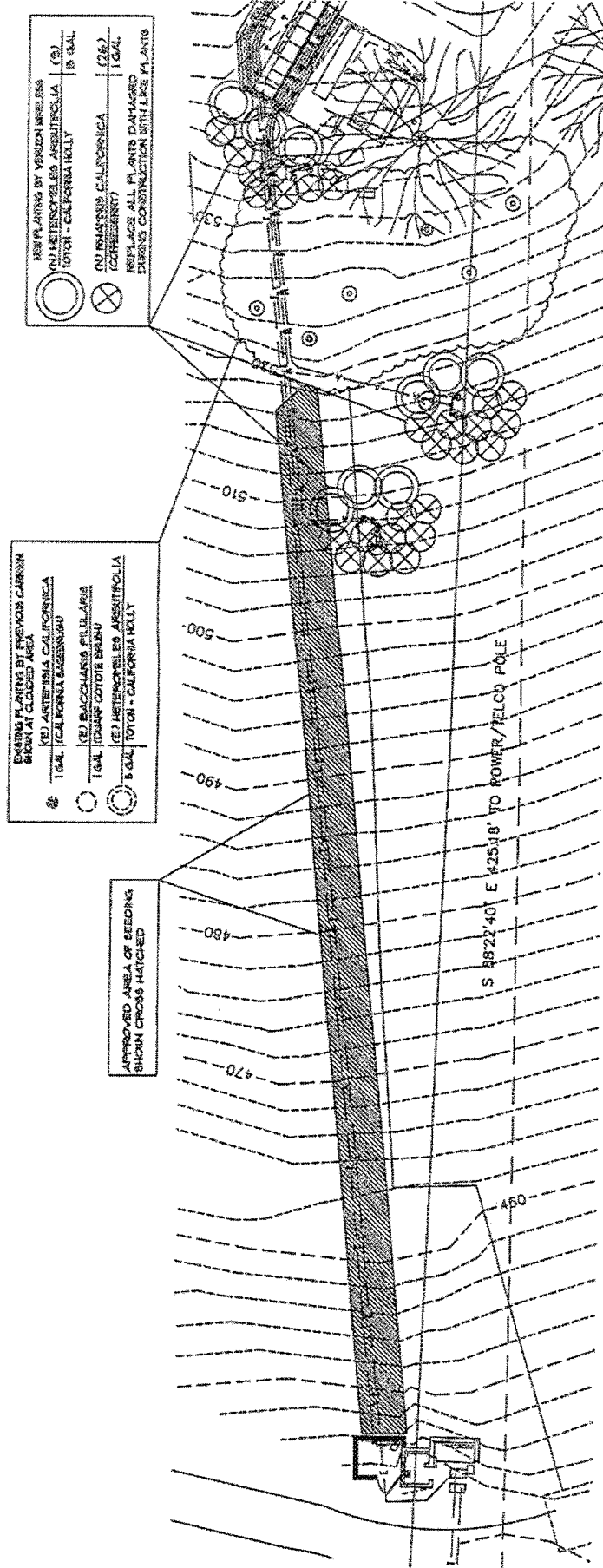
EXHIBIT I

Elevation

Stimson/Verizon DRC2003-00167



Elevation





6
MJI
SAN LUIS OBISPO COUNTY
DEPARTMENT OF PLANNING AND BUILDING
CREF 16-04
VICTOR HOLANDA, AICP
DIRECTOR

THIS IS A NEW PROJECT REFERRAL

DATE: 8/3/04
TO: City of SLO
FROM: South Co. Team
(Please direct response to the above)

Stimson
DRE 2003-00167
Project Name and Number

Development Review Section (Phone: 781-788-2009) (788-2008) marsha lee
Planner

PROJECT DESCRIPTION: CUP → cell site app., new cell towers & a facility for Verizon Wireless transmission. Off Slack St. in SLO.

Return this letter with your comments attached no later than: 8/18/04

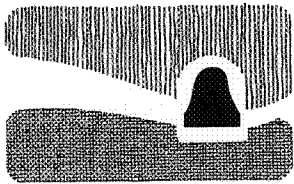
PART I IS THE ATTACHED INFORMATION ADEQUATE FOR YOU TO DO YOUR REVIEW?
☒ YES (Please go on to Part II)
☐ NO (Call me ASAP to discuss what else you need. We have only 30 days in which we must accept the project as complete or request additional information.)

PART II ARE THERE SIGNIFICANT CONCERNS, PROBLEMS OR IMPACTS IN YOUR AREA OF REVIEW?
☒ NO (Please go on to Part III)
☐ YES (Please describe impacts, along with recommended mitigation measures to reduce the impacts to less-than-significant levels, and attach to this letter.)

PART III INDICATE YOUR RECOMMENDATION FOR FINAL ACTION. Please attach any conditions of approval you recommend to be incorporated into the project's approval, or state reasons for recommending denial. IF YOU HAVE "NO COMMENT," PLEASE INDICATE OR CALL.

SEE ATTACHED

8/17/04 Date
Jeff Holanda Name
781-7176 Phone



city of san luis obispo

990 Palm Street, San Luis Obispo, CA 93401-3249

August 17, 2004

County of San Luis Obispo
Department of Planning and Building
County Government Center, Room 370
San Luis Obispo, CA 93408

Attn: Marsha Lee, Development Review Section

Subject: County Referral 16-04: Proposed Verizon cellular antenna facility on a hillside site located at 2100 Slack Street, adjacent to the City of San Luis Obispo (Stinson/DRC2003-00167).

Thank you for the opportunity to review this project. The project consists of three, 17 ft. tall steel poles, each with two antennas, a new, walled, 12X 28 ft. equipment enclosure at the upper end of the site, adjacent to a City water tower, and a 7 X 7 ft. meter enclosure. This is third cellular antenna installation on this sensitive hillside site, overlooking a City residential neighborhood. The City has several concerns with this project and requests the County deny this request.

The concentration of cellular facilities at this location is unsightly and directly visible by City residents on Slack Street, just downhill from this site. The proposal is inconsistent with City standards for wireless telecommunication facilities and with Hillside Development Standards (attached). With six existing antennas, this hillside site with a "SRA" designation is already overconcentrated with cellular equipment. The proposed addition of three 17 ft. poles, each with two antennas is not appropriate close to a city residential neighborhood. A visual impact study should be prepared as part of an environmental study to gauge the cumulative visual effects of this and the other cellular facilities. If the County supports this request despite the above concerns, the City recommends the following issues be addressed with conditions of approval:

1. Proposed access to the new facility is via a city-owned access easement. The applicant must execute an agreement with the City for the shared use of our easement. This is necessary to ensure that their work and facilities will not interfere with the operation and maintenance of the public water tank. The County should not, under any circumstances, issue a permit for work in or around the City's easement until and unless such an agreement is executed.
2. Equipment lighting, if proposed, shall be by a manual on/off switch only and shall be shielded to prevent glare and visibility from residents below. Automatic night time lighting shall not be allowed.
3. The proposed landscaping will not adequately screen the proposed antennas and equipment enclosures. If the County approves this request, landscape plantings should be selected for

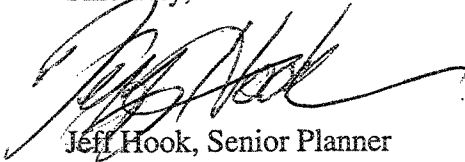


The City of San Luis Obispo is committed to include the disabled in all of its services, programs and activities. Telecommunications Device for the Deaf (805) 781-7410.

their ability to provide an effective visual screen of what is becoming an "antenna farm."
The City requests that a revised landscape plan be submitted to City staff for approval.

Thank you for considering the concerns of the citizens of San Luis Obispo. Please keep the City informed of the outcome of development review. If you have questions, please call me at 781-7176.

Sincerely,



Jeff Hook, Senior Planner

Attachments:

- Excerpt, San Luis Obispo Zoning Regulations (SLOMC 17.16.120)
- General Plan Land Use Element, Hillside Development Standards

cc: Cydney Holcomb, c/o Residents for Quality Neighborhoods, P.O. Box 12604, SLO 93406

june 2004

city of san luis obispo
zoning regulations

permit. Any antenna that may block significant views from neighboring buildings or from public areas shall be subject to architectural review.

4. **Number:** One dish type satellite antenna is allowed per site, in addition to normal television and radio antennas.

D. Commercial Performance Standards. The installation of dish-type satellite antenna may be permitted in the Office, Commercial, and Industrial zones subject to the following criteria:

1. Installation shall be subject to architectural review in accordance with the adopted Architectural Review Commission Ordinance and guidelines.
2. Installations shall not be permitted within street yard.
3. Installations shall be located so as to minimize visibility from adjoining properties and rights-of-way.

E. Exceptions. Dish-type satellite antenna installations that cannot meet the performance standards included in paragraphs C and D above may be considered if an administrative use permit is obtained as outlined by Chapter 17.58. Conditions imposed as part of use permit approval would typically include requirements to minimize the visibility of the installation, including blockage of significant public and private views of hillsides, city vistas, or open space areas. Acceptable techniques to reduce the visibility of dish installations include use of alternative materials (wire mesh instead of solid surface), painting the dish in a subdued or natural color, and landscaped screening.

F. Open Space/Conservation Standards. The installation of dish-type satellite antennas may be permitted in the Open Space/Conservation zone subject to an administrative use permit and subject to architectural review in accordance with the adopted ARC ordinance and guidelines.

G. Building Permit Required. All satellite dish installations require issuance of a building permit. This is to insure that dishes are structurally sound and properly grounded. Plans submitted for a building permit for a roof-mounted or pole-mounted installation require certification by a registered engineer. (Ord. 1107 - 1 Ex. A, 1987)



17.16.120 Wireless telecommunication facilities.

A. Purpose

To establish standards for the development, siting and installation of wireless telecommunications facilities; to protect and promote public health, safety, and welfare; and to preserve view corridors and avoiding adverse visual and environmental impacts. These standards are not intended to be all-inclusive. Projects may be subject to additional standards deemed appropriate through architectural review and use permit processing to address site-specific conditions.

B. Definitions.

1. Wireless telecommunications facilities consist of commercial wireless communications systems, including but not limited to: cellular, PCS, paging, broadband, data transfer, and any other type of technology that fosters wireless communication through the use of portable electronic devices. A facility includes all supporting structures and associated equipment.

city of san luis obispo
zoning regulations

june 2004

2. Co-location is the practice of two or more wireless telecommunication service providers sharing one support structure or building for the location of their antennas and equipment.
3. Stealthing means improvements or treatments added to a wireless telecommunications facility which mask or blend the proposed facility into the existing structure or visual backdrop in such a manner as to render it effectively unnoticeable to the casual observer.

C. Exempt facilities.

The following wireless telecommunication facilities are exempt from the requirements of this section:

1. Government-owned communications facilities used primarily to protect public health, welfare, and safety.
2. Facilities operated by providers of emergency medical services, including hospital, ambulance, and medical air transportation services, for use in the provision of those services.
3. Satellite dish antennas for residential and commercial use, solely for the use of the occupants of the site, subject to compliance with development standards set forth in Section 17.16.100 et al of the zoning ordinance.
4. Any facility specifically exempted under federal or state law.

D. Applications and approvals required.

Installation of a new wireless telecommunication or modification of an existing installation shall require use permit approval and architectural review. The applicant shall submit application materials and fees as required by the Community Development Department.

E. Building permit required.

Wireless communications facilities shall not be constructed, installed or modified prior to obtaining a City building permit.

F. Site development and performance standards.

1. **Setbacks.** All facility towers and accessory structures shall comply with the setback requirements of the applicable zoning district.
2. **Height.** The height of any antenna or support equipment shall be determined as part of the use permit on a case by case basis. All facilities shall be designed to the minimum necessary functional height.
3. **Site Access.** Telecommunication facilities should use existing roads and parking whenever possible. New and existing access roads and parking shall be improved and surfaced where necessary to the satisfaction of the Community Development Director.
4. **Aesthetics and Visibility.** Facilities shall be creatively designed to minimize the visual impact to the greatest extent possible by means of placement, screening and camouflage. The applicant shall use the smallest and least visible antennas possible to accomplish the coverage objectives. Each installation shall be designed to blend into its surroundings so that the antenna(s) and equipment are not apparent to the casual observer.

city of san luis obispo
zoning regulations

june 2004

- a. Building mounted facilities shall appear as an integral part of the structure. Equipment and antennas shall be compatible and in scale with existing architectural elements, building materials and site characteristics. Wall mounted antennas shall be integrated architecturally with the style and character of the structure. If possible, antennas and equipment shall be located entirely within an existing or newly created architectural feature so as to be effectively unnoticeable.
 - b. Ground mounted support equipment shall be undergrounded or otherwise screened from view so as to be effectively unnoticeable.
 - c. All connections and conduits between the base of the antenna(s) and support equipment shall be undergrounded. Connections and conduit above ground shall be fully enclosed to the satisfaction of the Community Development Director. Electrical and telephone service to the support equipment shall be undergrounded.
 - d. Ground mounted antennas, poles, structures, equipment, or other parts of a telecommunications facility, which would extend above a ridgeline so as to silhouette against the sky shall be discouraged. Where allowed, they shall be designed to be indistinguishable from the natural surroundings.
5. **Lighting.** All telecommunication facilities, not otherwise required to have lighting pursuant to Federal Aviation Administration rules, shall be unlit, except when authorized personnel are actually present at night, and except for exempt facilities.
 6. **Historic Buildings.** Any wireless facility located on or adjacent to a historic building or site shall be designed to ensure consistency with the Secretary of Interior standards for remodeling and rehabilitation.
 7. **Equipment Upgrades.** It shall be the responsibility of the owner/operator of a telecommunications facility to provide the City with a notice of intent to modify site equipment in any way. At the time of modification, co-location, or upgrade of facilities, existing equipment shall be replaced with equipment of equal or greater technical capacity and modified to reduce aesthetic impacts by reducing the size of the facility or introducing camouflaging techniques to the satisfaction of the Community Development Director. Unused or obsolete equipment or towers shall be removed from the site within 90 days after their use has ceased.
 8. **Number of facilities per site.** The City shall retain the authority to limit the number of antennas with related equipment and providers to be located at any site and adjacent sites in order to prevent negative visual impacts associated with multiple facilities.
 9. **Noise.** Each facility shall be operated in a manner that minimizes any possible disruption caused by noise to people working and living in the vicinity. At no time shall equipment noise from any source exceed an exterior noise level of 55 dB at the property line or within 20 feet of such equipment, whichever is less. This requirement may be modified at the discretion of the Community Development Director where typical ambient noise levels exceed 55 dB. Outdoor noise producing construction activities shall take place only on weekdays between the hours of 8:00 am and 5:00 pm unless a different schedule is approved as part of the use permit.
 10. **Backup Generators.** Any facility utilizing temporary backup generators shall be required to meet or exceed Air Pollution Control District Standards. All generators shall be fitted with approved air pollution control devices. Projects that propose to include backup generators shall require review and approval from the Air Pollution Control district. Project plans shall indicate location, size, horsepower, and type of fuel used for any proposed generator. Generators shall only be operated during power outages and for

testing and maintenance purposes. Testing and maintenance shall only take place on weekdays between the hours of 8:00 am and 5:00 pm.

11. **Biological Impacts.** Wireless telecommunication facility shall minimize potential impacts to biological resources to the greatest extent possible.
12. **Radio Interference.** Interference with municipal radio communication is prohibited. Any telecommunication facility that the City has reason to believe is interfering with municipal radio communication shall cease operation immediately upon notice from the City, and shall be subject to use permit review and possible revocation. Testing shall be done prior to any permanent installation and frequencies shall be monitored at regular intervals after installation established by the use permit, at the expense of the facility owner/operator.
13. **Airport Operations.** Wireless communications facilities shall not be sited in locations where they will interfere with the operation of the San Luis Obispo Airport. Wireless towers and related facilities within the Airport Planning Area shall be referred to the Airport Manager or the Airport Land Use Commission for a determination of consistency with airport area standards.
14. **Radio Frequencies and Electromagnetic Exposure.**
 - a. Wireless telecommunications facilities operating alone or in conjunction with other telecommunications facilities shall not produce radio frequency radiation in excess of the standards for permissible human exposure as adopted by the Federal Communications Commission (FCC). Applications for facilities shall include a radio frequency radiation (RFR) report that measures the predicted levels of RF radiation emitted by the proposed facility. The radio frequency radiation report shall compare proposed project levels to levels allowed by the FCC and shall show output of the proposed facility in combination with other facilities located or proposed in the vicinity.
 - b. The City may require one or more post-construction RFR reports as a condition of project approval, to verify that the actual levels of RFR emitted by the approved facilities, operating alone or in combination with other approved facilities, substantially conform to the pre-approval RFR report and do not exceed current standards for permissible human exposure to RFR as adopted by the FCC.
15. **Signs.** Explanatory warning signs shall be posted at all access points to cellular telecommunication facilities in compliance with the American National Standards Institute (ANSI) C95.2 color, symbol, and content conventions.
16. **Nuisance.** Facility generators, mechanical equipment, construction, testing and maintenance shall be operated or performed in such a manner that no nuisance results. At the discretion of the Director, upon receipt of written complaints, the use permit allowing a telecommunications facility may be scheduled for public review. At the hearing, conditions of approval may be added, deleted, or modified, or the use permit may be revoked.
17. **Interference with Public Services and Facilities.** Telecommunication facilities within public parks shall not interfere with park operations or limit public use of park facilities. Installations in conjunction with other public facilities shall be held to a similar standard.
18. **City Inspection.** The City shall have the right to access facilities after 24 hours written or verbal notice.

G. Abandonment.

city of san luis obispo
zoning regulationsjune 2004

It shall be the responsibility of the owner/operator of a telecommunications facility to provide the City with a notice of intent to vacate the site a minimum of thirty (30) days prior to ceasing operation. Any wireless telecommunication facility that is not operated for a continuous period of ninety (90) days shall be removed within ninety (90) days of the date upon which the operation ceased.

H. Revocation of a Permit.

Wireless telecommunication service providers shall fully comply with all conditions related to any permit or approval granted under this section. Failure to comply with any condition shall constitute grounds for revocation. If a condition is not remedied within a reasonable period, the Community Development Director may schedule a public hearing before the Planning Commission to consider revocation of the permit. (Ord. 1409 – 2001 Series)



GENERAL PLAN LAND USE ELEMENT

August, 1999



6.2 Hillside Policies

6.2.0 Introduction As discussed in the open space section, San Luis Obispo wants to keep open its steeper, higher, and most visible hillsides. Some of the lower and less steep hillside areas, however, are seen as suitable for development, particularly where development is coupled with permanent open space protection of the more sensitive areas. This section focuses on where and how some hillsides may be developed.

The City establishes comprehensive standards and policies for hillside development for the following reasons:

- A. To protect and preserve scenic hillside areas and natural features such as the volcanic Morros, ridge lines, plant communities, rock outcroppings and steep slope areas that function as landscape backdrops for the community.
- B. To set the limits of commercial and residential development in hillside areas by establishing a permanent open space green belt at the edge of the community.
- C. To protect the health, safety and welfare of community residents by directing development away from areas with hazards such as landslides, wildland fires, flooding and erosion.

6.2.1 Development Limits Hillsides planning areas should have carefully chosen development limit lines, and special design standards for the areas which can be developed. The location of the development limit and the standards should cause development to avoid encroachment into sensitive habitats or unique resources as defined in the Open Space Element, and public health and safety problems related to utility service, access, wildland fire hazard, erosion, flooding, and landslides and other geologic hazards. Also, the development limit line and the standards should help protect the City's scenic setting. (Locations of hillside planning areas are shown in Figure 6. More precise locations of the development limit line and the urban reserve line are shown on large-scale aerial photographs on file at the Community Development Department; these are part of the Land Use Element.)

6.2.2 Development Standards Development—including buildings, driveways, fences and graded yard areas—on hillside parcels shall:

- A. Be entirely within the urban reserve line or development limit line, whichever is more restrictive (though parcel boundaries may extend beyond these lines when necessary to meet minimum parcel-size standards), unless one of the following three exceptions applies.

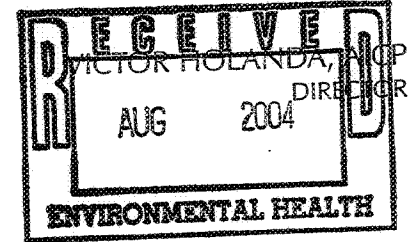
1. A location outside the urban reserve line or development limit line is necessary to protect public health and safety.
2. New wireless telecommunication facilities may be appropriate on South Street Hills inside the three-acre leasehold already developed with commercial and municipal radio facilities, subject to use permit approval and architectural review and approval. Applicants shall comply with all other provisions of this section, and demonstrate that (a) new facilities will not individually or additively interfere with City radio equipment necessary for emergency response coordination, and (b) will not cause on-site radio frequency radiation levels to exceed exposure standards established for the general public by the American National Standards Institute.
3. Where a legally built dwelling exists on a parcel which is entirely outside the urban reserve line or development limit line, a replacement dwelling may be constructed subject to standards B through H below.
 - B. Keep a low profile and conform to the natural slopes;
 - C. Avoid large, continuous walls or roof surfaces, or prominent foundation walls, poles, or columns;
 - D. Minimize grading of roads;
 - E. Minimize grading on individual lots; generally, locate houses close to the street; minimize the grading of visible driveways;
 - F. Include planting which is compatible with native hillside vegetation and which provides a visual transition from developed to open areas;
 - G. Use materials, colors, and textures which blend with the natural landscape and avoid high contrasts;
 - H. Minimize exterior lighting.

6.2.3 Parcels Crossing the Limit Lines Before development occurs on any parcel which crosses the urban reserve or development limit lines, the part outside the lines shall be protected as permanent open space.

6.2.4 Development Credit Transfer Any residential development credit obtained from Open Space designations outside the urban reserve line or development limit line should be transferred to land inside the lines.



MTL
SAN LUIS OBISPO COUNTY
DEPARTMENT OF PLANNING AND BUILDING



THIS IS A NEW PROJECT REFERRAL

DATE: 8/3/04
TO: Env. Health
FROM: South Co. Team
(Please direct response to the above)

Stimson
DRC 2003-00167
Project Name and Number

Development Review Section (Phone: 781-788-2009) (788-2008)
marsha lee

PROJECT DESCRIPTION: CUP → cell site app., new cell
towers & a facility for Verizon wireless transmission.
Off Slack St. in SLO.

Return this letter with your comments attached no later than: 8/18/04

PART I IS THE ATTACHED INFORMATION ADEQUATE FOR YOU TO DO YOUR REVIEW?
____ YES (Please go on to Part II)
____ NO (Call me ASAP to discuss what else you need. We have only 30 days in which we must accept the project as complete or request additional information.)

PART II ARE THERE SIGNIFICANT CONCERNS, PROBLEMS OR IMPACTS IN YOUR AREA OF REVIEW?
____ NO (Please go on to Part III)
____ YES (Please describe impacts, along with recommended mitigation measures to reduce the impacts to less-than-significant levels, and attach to this letter.)

PART III INDICATE YOUR RECOMMENDATION FOR FINAL ACTION. Please attach any conditions of approval you recommend to be incorporated into the project's approval, or state reasons for recommending denial. IF YOU HAVE "NO COMMENT," PLEASE INDICATE OR CALL.

Concerns would be regarding the potential for hazardous materials used and/or
stored at cell-site. Please have the applicant provide a hazardous materials
business plan with this office. Contact Jeff Poel at 781-5555 if
you need additional information.

8/16/04 Gauri Salo 781-5551
Date Name Phone



San Luis Obispo County
DEPARTMENT OF PLANNING AND BUILDING

RECEIVED AICP

DIRECTOR

AUG 27 2004

THIS IS A NEW PROJECT REFERRAL

SLO CO PLANNING & BLDG.

DATE:

8/3/04

TO:

COF

FROM:

South Co. Team

(Please direct response to the above)

Stimson

DRE 2003-00167

Project Name and Number

Development Review Section (Phone: 781-

788-2009)

marsha lee

(788-2008)

Planner

PROJECT DESCRIPTION:

CUP → cell site app., new cell towers & a facility for Verizon Wireless transmission. Off Slack St. in SLO.

Return this letter with your comments attached no later than:

8/18/04

PART I

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PART II

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YES (Please describe impacts, along with recommended mitigation measures to reduce the impacts to less-than-significant levels, and attach to this letter.)

PART III

INDICATE YOUR RECOMMENDATION FOR FINAL ACTION. Please attach any conditions of approval you recommend to be incorporated into the project's approval, or state reasons for recommending denial. IF YOU HAVE "NO COMMENT," PLEASE INDICATE OR CALL.

"No Comment"

Date

8/24/04

Name

Gilbert R. Portale

Phone

(805) 799-1025



MTL
SAN LUIS OBISPO COUNTY
DEPARTMENT OF PLANNING AND BUILDING

AUG 10 2004

VICTOR HOLANDA, AICP
DIRECTOR

COUNTY OF SAN LUIS OBISPO
THIS IS A NEW PROJECT REFERRAL

DATE: 8/3/04

FROM PW

FROM
V

South Co. Team
(Please direct response to the above)

Stimson
DRC 2003-00167
Project Name and Number

Development Review Section (Phone: 781-788-2009) (788-2008)
marsha lee
Planner

PROJECT DESCRIPTION: CUP → cell site app., new cell
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YES (Please describe impacts, along with recommended mitigation measures to reduce the impacts to less-than-significant levels, and attach to this letter.)

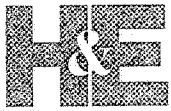
PART III INDICATE YOUR RECOMMENDATION FOR FINAL ACTION. Please attach any conditions of approval you recommend to be incorporated into the project's approval, or state reasons for recommending denial. IF YOU HAVE "NO COMMENT," PLEASE INDICATE OR CALL.

Recommend APPROVAL - NO CONCERNS. ACCESS off City streets,
minor grading.

03 Sep 2004
Date

Goodson
Name

5252
Phone



HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
RADIO AND TELEVISION

WILLIAM F. HAMMETT, P.E.
DANE E. ERICKSEN, P.E.
STANLEY SALEK, P.E.
ROBERT D. WELLER, P.E.
MARK D. NEUMANN, P.E.
ROBERT P. SMITH, JR.
RAJAT MATHUR

ROBERT L. HAMMETT, P.E.
1920-2002
EDWARD EDISON, P.E.

BY E-MAIL LEAH.EMERSON@RIDGECOMMUNICATE.COM

January 3, 2005

Ms. Leah Emerson
Ridge Communications, Inc.
1229 Bath Street, Suite B
Santa Barbara, California 93101

Dear Leah:

As you requested, we have updated our study of the RF exposure conditions near the Verizon Wireless base station (Site No. 10503402025) proposed to be located at 2100 Slack Street in San Luis Obispo, California. An electronic copy of our revised report is enclosed, reflecting the addition of measurement data. Fields in publicly accessible areas at the site are still calculated to be well below the applicable limits.

We appreciate the opportunity to be of service and would welcome any questions on this material. Please let me know if we may be of additional assistance.

Sincerely yours,

William F. Hammett

gk

Enclosures

e-mail: bhammett@h-e.com
US Mail: Box 280068 • San Francisco, California 94128
Delivery: 470 Third Street West • Sonoma, California 95476
Telephone: 707/996-5200 San Francisco • 707/996-5280 Facsimile • 202/396-5200 D.C.

**Verizon Wireless • Proposed Base Station (Site No. 1503402025 "Foothill")
2100 Slack Street • San Luis Obispo, California**

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of Verizon Wireless, a wireless telecommunications carrier, to evaluate the base station (Site No. 1503402025) proposed to be located at 2100 Slack Street in San Luis Obispo, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

Prevailing Exposure Standards

The U.S. Congress requires that the Federal Communications Commission ("FCC") evaluate its actions for possible significant impact on the environment. In Docket 93-62, effective October 15, 1997, the FCC adopted the human exposure limits for field strength and power density recommended in Report No. 86, "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," published in 1986 by the Congressionally chartered National Council on Radiation Protection and Measurements ("NCRP"). Separate limits apply for occupational and public exposure conditions, with the latter limits generally five times more restrictive. The more recent Institute of Electrical and Electronics Engineers ("IEEE") Standard C95.1-1999, "Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," includes nearly identical exposure limits. A summary of the FCC's exposure limits is shown in Figure 1. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

The most restrictive thresholds for exposures of unlimited duration to radio frequency energy for several personal wireless services are as follows:

<u>Personal Wireless Service</u>	<u>Approx. Frequency</u>	<u>Occupational Limit</u>	<u>Public Limit</u>
Personal Communication ("PCS")	1,950 MHz	5.00 mW/cm ²	1.00 mW/cm ²
Cellular Telephone	870	2.90	0.58
Specialized Mobile Radio	855	2.85	0.57
[most restrictive frequency range]	30-300	1.00	0.20

General Facility Requirements

Base stations typically consist of two distinct parts: the electronic transceivers (also called "radios" or "cabinets") that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The transceivers are often located at ground level and are connected to the antennas by coaxial cables about 1 inch thick. Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the antennas require line-of-sight paths for their signals to propagate well and so are installed at some height above ground. The antennas are designed to concentrate their energy toward



**Verizon Wireless • Proposed Base Station (Site No. 1503402025 "Foothill")
2100 Slack Street • San Luis Obispo, California**

the horizon, with very little energy wasted toward the sky or the ground. Along with the low power of such facilities, this means that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

Computer Modeling Method

The FCC provides direction for determining compliance in its Office of Engineering and Technology Bulletin No. 65, "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radio Frequency Radiation," dated August 1997. Figure 2 attached describes the calculation methodologies, reflecting the facts that a directional antenna's radiation pattern is not fully formed at locations very close by (the "near-field" effect) and that the power level from an energy source decreases with the square of the distance from it (the "inverse square law"). The conservative nature of this method for evaluating exposure conditions has been verified by numerous field tests.

Site and Facility Description

Based upon information provided by Verizon, including zoning drawings by On Design Architects, dated November 12, 2004, it is proposed to mount six Andrew Model 731X65VTXM directional panel dualband antennas on new 15-foot poles to be sited along the hillside at 2100 Slack Street in San Luis Obispo. The antennas would be mounted at an effective height of about 13 feet above ground and would be oriented in pairs toward 190°T, 250°T, and 300°T. The maximum effective radiated power in any direction would be 2,460 watts, representing simultaneous operation at 1,050 watts for PCS and 1,410 watts for cellular service. Presently located on nearby poles are similar antennas for use by AT&T Wireless and Cingular Wireless, other wireless telecommunications carriers.

The maximum power density level observed at any ground level location at the site on December 29, 2004, a non-holiday weekday, by Mr. John W. Mowat, a qualified employee of Hammett & Edison, Inc., was 16% of the public limit for the combined operation of the existing RF services at the site as installed and operating at that time. The measurement equipment used was a Wandel & Goltermann Type EMR-300 Radiation Meter with Type 25 Isotropic Electric Field Probes (Serial No. E-0001). Both meter and probe were under current calibration by the manufacturer.

Study Results

For a person anywhere at ground, the maximum ambient RF exposure level due to the proposed Verizon operation by itself is calculated to be 0.11 mW/cm², which is 18% of the applicable public limit. It should be noted that this result includes several "worst-case" assumptions and therefore is expected to overstate actual power density levels. The maximum cumulative level at ground for the



**Verizon Wireless • Proposed Base Station (Site No. 1503402025 "Foothill")
2100 Slack Street • San Luis Obispo, California**

simultaneous operation of all three carriers is therefore expected to be less than 34% of the public exposure limit.

No Recommended Mitigation Measures

Since they are to be mounted on poles, the Verizon antennas are not accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. It is presumed that the several carriers will, as FCC licensees, take adequate steps to ensure that their employees or contractors comply with FCC occupational exposure guidelines whenever work is required near the antennas themselves.

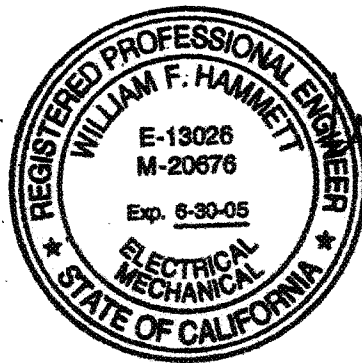
Conclusion

Based on the information and analysis above, it is the undersigned's professional opinion that the base station proposed by Verizon Wireless at 2100 Slack Street in San Luis Obispo, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas due to Verizon by itself is less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations.

Authorship

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration Nos. E-13026 and M-20676, which expire on June 30, 2005. This work has been carried out by him or under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.

January 3, 2005



William F. Hammett
William F. Hammett, P.E.



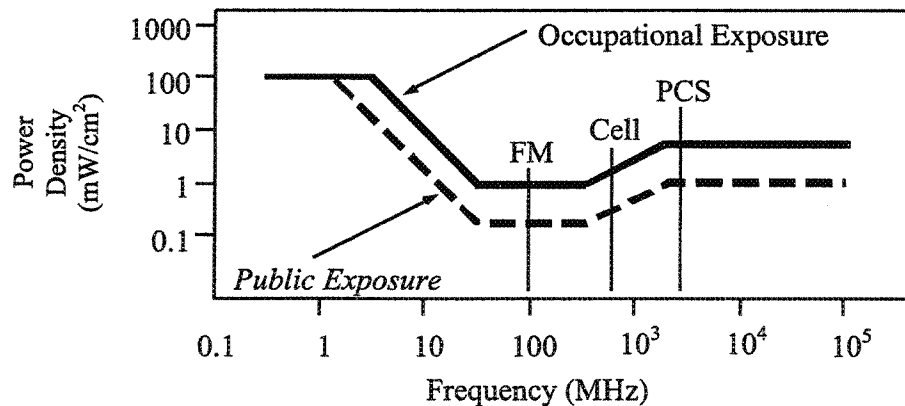
HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

FCC Radio Frequency Protection Guide

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission ("FCC") to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The FCC adopted the limits from Report No. 86, "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," published in 1986 by the Congressionally chartered National Council on Radiation Protection and Measurements, which are nearly identical to the more recent Institute of Electrical and Electronics Engineers Standard C95.1-1999, "Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz." These limits apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

As shown in the table and chart below, separate limits apply for occupational and public exposure conditions, with the latter limits (in *italics* and/or dashed) up to five times more restrictive:

Frequency Applicable Range (MHz)	Electromagnetic Fields (f is frequency of emission in MHz)					
	Electric Field Strength (V/m)		Magnetic Field Strength (A/m)		Equivalent Far-Field Power Density (mW/cm ²)	
0.3 – 1.34	614	<i>614</i>	1.63	<i>1.63</i>	100	<i>100</i>
1.34 – 3.0	614	<i>823.8/f</i>	1.63	<i>2.19/f</i>	100	<i>180/f²</i>
3.0 – 30	1842/f	<i>823.8/f</i>	4.89/f	<i>2.19/f</i>	900/f ²	<i>180/f²</i>
30 – 300	61.4	<i>27.5</i>	0.163	<i>0.0729</i>	1.0	<i>0.2</i>
300 – 1,500	$3.54\sqrt{f}$	<i>$1.59\sqrt{f}$</i>	$\sqrt{f}/106$	<i>$\sqrt{f}/238$</i>	$f/300$	<i>$f/1500$</i>
1,500 – 100,000	137	<i>61.4</i>	0.364	<i>0.163</i>	5.0	<i>1.0</i>



Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits, and higher levels also are allowed for exposures to small areas, such that the spatially averaged levels do not exceed the limits. However, neither of these allowances is incorporated in the conservative calculation formulas in the FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) for projecting field levels. Hammett & Edison has built those formulas into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radio sources. The program allows for the description of buildings and uneven terrain, if required to obtain more accurate projections.



RFR.CALC™ Calculation Methodology

Assessment by Calculation of Compliance with FCC Exposure Guidelines

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission ("FCC") to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The maximum permissible exposure limits adopted by the FCC (see Figure 1) apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits.

Near Field.

Prediction methods have been developed for the near field zone of panel (directional) and whip (omnidirectional) antennas, typical at wireless telecommunications cell sites. The near field zone is defined by the distance, D, from an antenna beyond which the manufacturer's published, far field antenna patterns will be fully formed; the near field may exist for increasing D until some or all of three conditions have been met:

$$1) D > \frac{2h^2}{\lambda} \qquad 2) D > 5h \qquad 3) D > 1.6\lambda$$

where h = aperture height of the antenna, in meters, and
 λ = wavelength of the transmitted signal, in meters.

The FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) gives this formula for calculating power density in the near field zone about an individual RF source:

$$\text{power density } S = \frac{180}{\theta_{BW}} \times \frac{0.1 \times P_{net}}{\pi \times D \times h}, \text{ in mW/cm}^2,$$

where θ_{BW} = half-power beamwidth of antenna, in degrees, and
 P_{net} = net power input to the antenna, in watts.

The factor of 0.1 in the numerator converts to the desired units of power density. This formula has been built into a proprietary program that calculates distances to FCC public and occupational limits.

Far Field.

OET-65 gives this formula for calculating power density in the far field of an individual RF source:

$$\text{power density } S = \frac{2.56 \times 1.64 \times 100 \times RFF^2 \times ERP}{4 \times \pi \times D^2}, \text{ in mW/cm}^2,$$

where ERP = total ERP (all polarizations), in kilowatts,
RFF = relative field factor at the direction to the actual point of calculation, and
D = distance from the center of radiation to the point of calculation, in meters.

The factor of 2.56 accounts for the increase in power density due to ground reflection, assuming a reflection coefficient of 1.6 ($1.6 \times 1.6 = 2.56$). The factor of 1.64 is the gain of a half-wave dipole relative to an isotropic radiator. The factor of 100 in the numerator converts to the desired units of power density. This formula has been built into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radiation sources. The program also allows for the description of uneven terrain in the vicinity, to obtain more accurate projections.

